

1       2. The apparatus of claim 1, wherein the package comprises; a package including  
2       a cavity for receiving the mass.

1       3. The apparatus of claim 1, wherein the package comprises:  
2       a package including a recess for receiving the rigid member.

1       4. The apparatus of claim 1, wherein the mass comprises one or more bond pads  
2       for coupling the mass to the package.

1       5. The apparatus of claim 4, wherein the bond pads have a cross-sectional shape  
2       selected from the group consisting of approximately rectangular, approximately oval,  
3       approximately tri-oval, approximately oct-oval, approximately wavy sided rectangular,  
4       approximately oct-pie-wedge, approximately hollow oct-pie-wedge, approximately nine-  
5       circular, approximately starburst, or approximately sunburst.

1       6. The apparatus of claim 4, wherein the mass comprises one or more passive  
2       regions; and

3               wherein the bond pads are approximately located in the passive regions.

1       7. The apparatus of claim 4, wherein the mass further comprises a first passive  
2       region; and

3               wherein the bond pads are approximately located in the first passive region.

1       8. The apparatus of claim 7, wherein the first passive region is located at one end  
2       of the mass.

1       9. The apparatus of claim 4, wherein the mass further comprises a first passive  
2       region and a second passive region; and

3               wherein the bond pads are located in the first passive region and the second  
4       passive region.

1       10. The apparatus of claim 9, wherein the first passive region is located at one end  
2       of the mass; and

3               wherein the second passive region is located at the opposite end of the mass.

1       11. The apparatus of claim 4, wherein the mass further comprises a first passive  
2       region integral to the active region; and  
3                wherein the bond pads are located in the first passive region.

1       12. The apparatus of claim 11, wherein the first passive region is located at one end  
2       of the mass; and  
3                wherein the first active region is located at the opposite end of the mass.

1       13. The apparatus of claim 4, wherein the mass further comprises an active region;  
2       and  
3                wherein the bond pads are approximately located in the active region.

1       14. The apparatus of claim 13, wherein the bond pads are located in the  
2       approximate center of the active region.

1       15. The apparatus of claim 1, wherein the rigid members have a cross-sectional  
2       shape that is approximately rectangular or approximately circular.

1       16. The apparatus of claim 1, wherein the rigid members are approximately located  
2       at one end of the package.

1       17. The apparatus of claim 1, wherein the rigid members are approximately located  
2       at the approximate center of the package.

1       18. The apparatus of claim 1, wherein there are one or more first rigid members and  
2       one or more second rigid members;  
3                wherein the first rigid members are approximately located at one end of the  
4       package; and  
5                wherein the second rigid members are approximately located at the opposite  
6       end of the package.

1       19. The apparatus of claim 1, wherein the rigid members are a material selected  
2       from the group consisting of solder, conductive epoxy, non-conductive epoxy, and glass  
3       frit.

1       20. The apparatus of claim 1, further comprising one or more sliding supports  
2       coupled to the package for slidingly supporting the mass.

1       21. The apparatus of claim 20, wherein the sliding supports have a cross-sectional  
2       shape selected from the group consisting of approximate square, approximate circle,  
3       approximate triangle and approximate rectangle.

1       22. The apparatus of claim 1, wherein the package comprises:  
2       a package including a pedestal for supporting the rigid members.

1       23. The apparatus of claim 1, wherein the mass is a micro-machined device, an  
2       integrated circuit chip, or an optical device.

1       24. The apparatus of claim 1, wherein the rigid members further electrically couple  
2       the mass to the package.

1       25. A method of coupling a mass having an active region to a package to reduce  
2       effects of thermal stress, comprising:  
3       attaching at least one surface point on the mass to the package using one or  
4       more substantially rigid members to create a resilient coupling between the  
5       mass and the package, wherein at least a portion of the active region is spaced  
6       apart from the at least one point of attachment.

1       26. The method of claim 25, wherein attaching the mass comprises attaching the  
2       mass at a plurality of locations.

1       27. The method of claim 25, wherein the mass comprises a passive region, and  
2       wherein attaching the mass comprises attaching the passive region to the package.

1       28. The method of claim 27, wherein the passive region is located at one end of the  
2       mass.

1       29. The method of claim 25, wherein attaching the mass comprises attaching the  
2       active region to the package.

1       30. The method of claim 29, wherein attaching the active region comprises attaching  
2       the approximate center of the active region to the package.

1       31. The method of claim 25, wherein the mass comprises a first passive region and  
2       a second passive region; and

3               wherein attaching the mass comprises attaching the first passive region to the  
4       package and attaching the second passive region to the package.

1       32. The method of claim 31, wherein the first passive region is located at one end  
2       of the mass; and

3               wherein the second passive region is located at an opposite end of the mass.

1       33. The method of claim 25, wherein the mass further comprises a passive region  
2       integral to the active region; and

3               wherein attaching the mass comprises attaching the passive region to the  
4       package.

1       34. The method of claim 33, wherein the passive region is at one end of the mass;  
2       and

3               wherein the active region is at the opposite end of the mass.

1       35. The method of claim 25, wherein attaching the mass comprises permitting the  
2       mass to expand and contract without inducing stresses in the mass.

1       36. The method of claim 25, wherein attaching the mass comprises providing for  
2       expansion and contraction of the package without inducing stresses in the mass.

1       37. The method of claim 25, further comprising slidably supporting the mass at one  
2       or more different locations.

1       38. The method of claim 37, wherein slidably supporting the mass comprises  
2       slidably supporting the mass at a plurality of locations.

1       39. The method of claim 37, wherein slidingly supporting the mass comprises  
2       providing for expansion and contraction without inducing stresses in the package.

1       40. The method of claim 25, wherein attaching the mass comprises providing for  
2       expansion and contraction without inducing stresses in the package.

1       41. The method of claim 25, further comprising electrically coupling the mass to the  
2       package at one or more different locations.

Respectfully submitted,

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